

Before the paragraph beginning at page 2, line 21, insert as a heading:

✓ Summary of the Invention

Amendments to the paragraph beginning at page 2, line 21:

A1
In view of the disadvantages of the previously known axial flow motors and generators, the invention is based on the following object. The aim is to provide an electric axial flow machine, the rotor of which is as low in mass and inertia as possible, but nevertheless stable and also suitable for high rotational speeds.

Delete the paragraph beginning at page 2, line 30.

Amendments to the paragraph beginning at page 2, line 37:

A2
An important feature of the invention is that, in an electric axial flow machine with an ironless disk-shaped rotor which is arranged on a machine shaft and has permanent magnets which are embedded in a fiber- or fabric-reinforced plastic, the permanent magnets are each joined with a positive fit to the surrounding fiber- or fabric-reinforced plastic and the latter, together with the permanent magnets and the machine shaft, forms a dimensionally stable unit. Arranged next to the rotor on both sides there is in each case a stator.

Before the paragraph beginning at page 3, line 36 insert as a heading:

✓ Brief Description of the Drawing Figures

Amendments to the paragraph beginning at page 4, line 5:

A3
figure 2 shows the axial flow machine in a partial sectional view along the line II-II in figure 1;

Amendments to the paragraph beginning at page 4, line 13:

A4
figure 4 shows the rotor including the machine shaft in a partial sectional view along the line IV-IV in figure 3;

Amendments to the paragraph beginning at page 4, line 23:

A5 figure 7 shows a sectional view of the segmented permanent magnet along the line VII-VII in figure 6;

Amendments to the paragraph beginning at page 4, line 36:

A6 figure 11 shows a sectional view of the stator along the line XI-XI in figure 10.

Before the heading at page 5, line 1 insert as a heading:

Detailed Description

IN THE CLAIMS:

Replace the indicated claims with:

- 56*
B37
A7
1. (Amended) An electric axial flow machine including an ironless disk-shaped rotor arranged on a machine shaft and having permanent magnets embedded in a fiber- or fabric-reinforced plastic, and, on both sides, next to the rotor, a stator, wherein the permanent magnets are each joined to the surrounding fiber- or fabric-reinforced plastic so that the permanent magnets and the machine shaft, form a dimensionally stable unit.
 2. (Amended) The electric axial flow machine as claimed in claim 1, wherein the permanent magnets are arranged in a circle around the machine shaft and the fiber- or fabric-reinforced plastic extends between the permanent magnets over at least 10%, of the circle.
 3. (Amended) The electric axial flow machine as claimed in claim 1, wherein the rotor has on an outer circumference or proximate the outer circumference a stiffening band comprising preimpregnated fibrous material, the rotor becoming thicker with increasing distance from the machine shaft.
 4. (Amended) The electric axial flow machine as claimed in claim 1, comprising means for determining magnetic pole position of the rotor including a magnetic strip arranged on an outer circumference of the rotor and having a radially magnetized series of magnetic poles arranged in correspondence to the permanent magnets embedded in the fiber- or fabric-reinforced plastic, and fixed-in-place Hall probes interacting with the magnetic poles.